

JUL 03 2007

Application No.: 10/623,011

Docket No.: NGW-009RCE

REMARKS

Applicants amend claims 1 and 4. Support for the claim amendment can be found throughout the specification and at least at page 14, line 2 and page 13, lines 14-17. No new matter is added. Upon entry of this amendment, claims 1-8 are pending, of which claims 1 and 4 are independent. Applicants respectfully submit that the pending claims define over the art of record.

Claim Rejections under 35 U.S.C. §112

Claims 1-8 are rejected under 35 U.S.C. §112, first paragraph. The Examiner states that the limitation "dynamically" set is not supported by the disclosure as originally filed.

Applicants amend claims 1 and 4 to delete the limitation "dynamically." Applicants amend claim 1 to recite "a memory unit for storing a determination threshold value which *changes* according to the operating state." Applicants amend claim 4 to recite "comparing a detection value of the hydrogen in the off-gas and a determination threshold value *changing* according to the detected operating state." We believe support for this amendment can be found specifically at page 14, line 2 and page 13, lines 14-17.

Claims 2-3 depend from claim 1. Claims 5-8 depend from claim 4. Dependent claims incorporate each and every element of the independent claim upon which they depend. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 1-8 under 35 U.S.C. §112.

Claim Rejections under 35 U.S.C. §102/103

Claims 1-8 are rejected under 35 U.S.C. §102(e) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,461,751 to Boehm (hereafter "Boehm").

Applicants amend independent claim 1 to recite that the operating state detecting unit is *separate and distinct from* the hydrogen sensor. Similarly, Applicants amend independent claim 4 to recite that the step of detecting an operating state of the fuel cell is *separate and distinct from* the step of detecting hydrogen in the off-gas. Support for the amendments can be found

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throughout the Specification and specifically at page 3, lines 15-19; page 7, lines 5-9 and the corresponding Figure 1. Applicants respectfully submit that the Boehm reference does not teach or suggest this limitation.

The Boehm reference teaches monitoring a cathode exhaust stream to detect the hydrogen gas concentration, and then decreasing oxidant stoichiometry when the hydrogen gas concentration is less than a first threshold concentration. See Col. 5, lines 3-7. The Boehm reference further teaches that the predetermined range and threshold value depend upon the particular characteristics and operating conditions of each particular fuel cell or fuel cell stack. See Col. 8, lines 17-20. The Boehm reference specifically teaches the use of a single sensor 104 that can detect the voltage output of the fuel cell stack or selected individual fuel cells within the stack, or that can detect the concentration of oxygen or hydrogen in a cathode exhaust system. See Col. 14, lines 46-50.

In contrast, Applicants' claim 1 recites both the use of a hydrogen sensor to detect hydrogen in the cathode off-gas and an operating state detecting unit for detecting the operating state of the fuel cell. Hence, the Boehm reference does not disclose, teach or suggest *an operating state detecting unit separate and distinct from the hydrogen sensor*. Moreover, the Boehm reference does not teach changing a determination threshold value according to the operating state of the fuel cell, where the operating state is determined by an operating state detecting unit that is separate and distinct from the hydrogen sensor.

Claims 2-3 depend from claim 1. Claims 5-8 depend from claim 4. Dependent claims incorporate each and every element of the independent claim upon which they depend. Applicants respectfully submit that the Boehm reference does not disclose, teach or suggest each and every element of claims 1-8. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 1-8 under 35 U.S.C. §102(e), or in the alternative under 35 U.S.C. § 103(a).

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CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicants believe no additional fee is due with this statement. However, if an additional fee is due, please charge our Deposit Account No. 12-0080, under Order No. NGW-009RCE from which the undersigned is authorized to draw.

Dated: July 3, 2007

Respectfully submitted,

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